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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,828	11/29/2001	Jin-gyo Seo	1293.1273	9729
21171 7590 04/30/2007 STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER DINH, TAN X	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 04/30/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/995,828	SEO, JIN-GYO	
	Examiner	Art Unit	
	TAN X. DINH	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) 30 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24 and 29 is/are allowed.
- 6) ☐ Claim(s) 18-21 and 26-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1) The amendment filed 1/30/2007 is acknowledged. Claims 1-17,22,23 and 25 have been canceled.

2) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

3) (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4) Claims 18-20,26,27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by APPLICANT's PRIOR ART (Figures 1,2,3A and 3B).

The APPLICANT's PRIOR ART shows a method for controlling recording a signal on an optical disk as claimed in *claim 18*, comprising the step of:

providing a multiple pulse train for recording mark on the optical disk, the multiple pulse train comprising a first pulse, a multi-pulse having a reference power level and a last pulse (figure 3A, first pulse, a multi-pulse having a reference power level and a last pulse ; ,

controlling a power level of last pulse independent of a

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power level of first pulse (specification, page 6, paragraph [0025]. In this case, the power of last pulse and first pulse are independently controlled and adjusted depends on the combination between previous space and current mark or depends on the correlation between next space and current mark. See figure 3A, the power applied only to first pulse on first multiple pulse train, the power applied only to last pulse on second multiple pulse train).

Wherein the last pulse is different power level than first pulse (figure 3A, the second multiple pulse have first pulse and last pulse of different power level).

As to *claim 19*, the APPLICANT's PRIOR ART shows the power levels of the first and last pulse are controlled by selecting a peak power level P_w , a power P_{wh} higher than the peak power level P_w , or power P_{wl} lower than the peak power level P_w to be generated during the first and last pulses (Fig.3A, the power levels of the first and last pulse are controlled by selecting a peak power level, higher than peak power level or lower than peak power level).

As to *claim 20*, the APPLICANT's PRIOR ART shows P_w is an optimum peak power level and P_w and P_{wl} are generated by adding or subtracting a predetermined value to or from the optimum peak

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power level P_w respectively (as seen in figure 3A, any power level higher than peak power level and P_w or lower than peak power level and P_w by adding or subtracting a predetermined value).

As to *claim 26*, the APPLICANT's PRIOR ART shows the power level of multi-pulse is controlled independent of first and last pulses in figure 3B (the power level of multi-pulse (peak power level) is controlled depends from on the energy of NRZI signal).

As to *claim 27*, the APPLICANT's PRIOR ART shows a method of forming a mark on an optical recording medium, the method comprising the step of :

generating a recording pulse train comprising a first pulse, a multi-pulse having a peak power level and a last pulse (Fig.3A, the second multiple pulse train, first pulse, a multi-pulse having a peak power level and a last pulse);

adapting a power level of at least one of the first pulse and the last pulse relative to a peak power level of the multi-pulse depending on a correlation between the mark and one of a previous space and a next space (Fig3A, the third multiple pulse train);

driving a recording unit with the recording pulse train to record the mark on the optical recording medium (Figs.3A and 3B. See also the specification, page 6, paragraph [0025] to [0029]).

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As to *claim 28*, the APPLICANT's PRIOR ART shows the feature of adapting the peak power level of the multi-pulse depending on a size of the mark (see figures 3A and 3B).

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6) Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over APPLICANT's PRIOR ART (Figures 1,2,3A and 3B).

The APPLICANT's PRIOR ART discloses all the subject matter claimed as in claim 21, *except to specifically show that* multi-pulse reference power level is greater than first pulse power level and less than last pulse power level. It would have been obvious to someone within the level of skill in the art at the time of the invention was made to adjust the power level of multi-pulse to be greater/lower first or last pulse, the rationale is as follows:

In figure 3B of the prior art and the specification, paragraph [0027] to [0028], the power level of multi-pulse is adjusted the peak power level P_w , which is the reference power level may be controlled depending on the density of marks and spaces. Figure 3B shows an example in which a reference power level, which is a reference write power level or a peak level is adjusted depending on energy of a non-return-to-zero inverted (NRZI) signal (a mark and a space correspond to high and low levels of an NRZI signal, the reference power level is any of peak powers 1, 2, and 3 depending on the energy of an NRZI signal). In another words, the multi-pulse reference power level can be adjusted at any suitable value as compared to first pulse and last pulse, therefore, one of ordinary skill in the art at the time of the invention was made would have been motivated to adjust the multi-pulse reference power level for greater than first pulse power level and less than last pulse power level as claimed.

7) Claims 24 *and* 29 allowed.

8) Applicant's arguments filed 1/30/2007 have been fully considered but they are not persuasive.

Applicant amended to make the previously allowable claims

broader and they could read on the prior art of figures 1,2,3A and 3B and these claims are now found rejectable as shown above.

9) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10) This application contains claim 30 drawn to an invention non-elected with traverse in Paper No. 12/08/2005. A complete reply

to the final rejection must include cancellation of non-elected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

11) Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAN XUAN DINH whose telephone number is (571)272-7586. The examiner can normally be reached on MONDAY to FRIDAY from 9:00AM to 5:00PM.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TAN DINH
PRIMARY EXAMINER

April 27, 2007